

§ 383.115

(iv) Ascertain, with the engine running, that the system maintains an adequate supply of compressed air;

(v) Determine that required minimum air pressure build up time is within acceptable limits and that required alarms and emergency devices automatically deactivate at the proper pressure level; and

(vi) Operationally check the brake system for proper performance.

(2) *Driving skills.* Applicants shall successfully complete the skills tests contained in §383.113 in a representative vehicle equipped with air brakes.

(d) *Test area.* Skills tests shall be conducted in on-street conditions or under a combination of on-street and off-street conditions.

(e) *Simulation technology.* A State may utilize simulators to perform skills testing, but under no circumstances as a substitute for the required testing in on-street conditions.

§ 383.115 Requirements for double/triple trailers endorsement.

In order to obtain a Double/Triple Trailers endorsement each applicant must have knowledge covering:

(a) Procedures for assembly and hookup of the units;

(b) Proper placement of heaviest trailer;

(c) Handling and stability characteristics including off-tracking, response to steering, sensory feedback, braking, oscillatory sway, rollover in steady turns, yaw stability in steady turns; and

(d) Potential problems in traffic operations, including problems the motor vehicle creates for other motorists due to slower speeds on steep grades, longer passing times, possibility for blocking entry of other motor vehicles on free-ways, splash and spray impacts, aerodynamic buffeting, view blockages, and lateral placement.

§ 383.117 Requirements for passenger endorsement.

An applicant for the passenger endorsement must satisfy both of the following additional knowledge and skills test requirements.

(a) *Knowledge test.* All applicants for the passenger endorsement must have

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knowledge covering at least the following topics:

(1) Proper procedures for loading/unloading passengers;

(2) Proper use of emergency exits, including push-out windows;

(3) Proper responses to such emergency situations as fires and unruly passengers;

(4) Proper procedures at railroad crossings and drawbridges; and

(5) Proper braking procedures.

(b) *Skills test.* To obtain a passenger endorsement applicable to a specific vehicle group, an applicant must take his/her skills test in a passenger vehicle satisfying the requirements of that group as defined in §383.91.

§ 383.119 Requirements for tank vehicle endorsement.

In order to obtain a Tank Vehicle Endorsement, each applicant must have knowledge covering the following:

(a) Causes, prevention, and effects of cargo surge on motor vehicle handling;

(b) Proper braking procedures for the motor vehicle when it is empty, full and partially full;

(c) Differences in handling of baffled/compartmental tank interiors versus non-baffled motor vehicles;

(d) Differences in tank vehicle type and construction;

(e) Differences in cargo surge for liquids of varying product densities;

(f) Effects of road grade and curvature on motor vehicle handling with filled, half-filled and empty tanks;

(g) Proper use of emergency systems; and

(h) For drivers of DOT specification tank vehicles, retest and marking requirements.

§ 383.121 Requirements for hazardous materials endorsement.

In order to obtain a Hazardous Material Endorsement each applicant must have such knowledge as is required of a driver of a hazardous materials laden vehicle, from information contained in 49 CFR parts 171, 172, 173, 177, 178, and 397 on the following:

(a) Hazardous materials regulations including:

(1) Hazardous materials table;

(2) Shipping paper requirements;

(3) Marking;

- (4) Labeling;
- (5) Placarding requirements;
- (6) Hazardous materials packaging;
- (7) Hazardous materials definitions and preparation;
- (8) Other regulated material (e.g., ORM-D);
- (9) Reporting hazardous materials accidents; and
- (10) Tunnels and railroad crossings.
- (b) Hazardous materials handling including:
 - (1) Forbidden Materials and Packages;
 - (2) Loading and Unloading Materials;
 - (3) Cargo Segregation;
 - (4) Passenger Carrying Buses and Hazardous Materials;
 - (5) Attendance of Motor Vehicles;
 - (6) Parking;
 - (7) Routes;
 - (8) Cargo Tanks; and
 - (9) "Safe Havens."
- (c) Operation of emergency equipment including:
 - (1) Use of equipment to protect the public;
 - (2) Special precautions for equipment to be used in fires;
 - (3) Special precautions for use of emergency equipment when loading or unloading a hazardous materials laden motor vehicle; and
 - (4) Use of emergency equipment for tank vehicles.
- (d) Emergency response procedures including:
 - (1) Special care and precautions for different types of accidents;
 - (2) Special precautions for driving near a fire and carrying hazardous materials, and smoking and carrying hazardous materials;
 - (3) Emergency procedures; and
 - (4) Existence of special requirements for transporting Class A and B explosives.

APPENDIX TO SUBPART G—REQUIRED KNOWLEDGE AND SKILLS—SAMPLE GUIDELINES

The following is a sample of the specific types of items which a State may wish to include in the knowledge and skills tests that it administers to CDL applicants. This appendix closely follows the framework of §§383.111 and 383.113. It is intended to provide more specific guidance and suggestion to States. Additional detail in this appendix is not binding and States may depart from it at

their discretion provided their CDL program tests for the general areas of knowledge and skill specified in §§383.111 and 383.113.

EXAMPLES OF SPECIFIC KNOWLEDGE ELEMENTS

(a) *Safe operations regulations.* Driver-related elements of the following regulations:

- (1) Motor vehicle inspection, repair, and maintenance requirements as contained in parts 393 and 396 of this title;
- (2) Procedures for safe vehicle operations as contained in part 392 of this title;
- (3) The effects of fatigue, poor vision, hearing, and general health upon safe commercial motor vehicle operation as contained in parts 391, 392, and 395 of this title;
- (4) The types of motor vehicles and cargoes subject to the requirements contained in part 397 of this title; and
- (5) The effects of alcohol and drug use upon safe commercial motor vehicle operations as contained in parts 391 and 395 of this title.

(b) *Commercial motor vehicle safety control systems.* Proper use of the motor vehicle's safety system, including lights, horns, side and rear-view mirrors, proper mirror adjustments, fire extinguishers, symptoms of improper operation revealed through instruments, motor vehicle operation characteristics, and diagnosing malfunctions. Commercial motor vehicle drivers shall have knowledge on the correct procedures needed to use these safety systems in an emergency situation, e.g., skids and loss of brakes.

(c) *Safe vehicle control—(1) Control systems.* The purpose and function of the controls and instruments commonly found on commercial motor vehicles.

(2) *Basic control.* The proper procedures for performing various basic maneuvers, including:

- (i) Starting, warming up, and shutting down the engine;
- (ii) Putting the vehicle in motion and stopping;
- (iii) Backing in a straight line; and
- (iv) Turning the vehicle, e.g., basic rules, off-tracking, right/left turns and right curves.

(3) *Shifting.* The basic shifting rules and terms, as well as shift patterns and procedures for common transmissions, including:

- (i) Key elements of shifting, e.g., controls, when to shift and double clutching;
- (ii) Shift patterns and procedures; and
- (iii) Consequences of improper shifting.

(4) *Backing.* The procedures and rules for various backing maneuvers, including:

- (i) Backing principles and rules; and
- (ii) Basic backing maneuvers, e.g., straight-line backing, and backing on a curved path.

(5) *Visual search.* The importance of proper visual search, and proper visual search methods, including:

- (i) Seeing ahead and to the sides;
- (ii) Use of mirrors; and

(iii) Seeing to the rear.

(6) *Communication*. The principles and procedures for proper communications and the hazards of failure to signal properly, including:

- (i) Signaling intent, e.g., signaling when changing speed or direction in traffic;
- (ii) Communicating presence, e.g., using horn or lights to signal presence; and
- (iii) Misuse of communications.

(7) *Speed management*. The importance of understanding the effects of speed, including:

- (i) Speed and stopping distance;
- (ii) Speed and surface conditions;
- (iii) Speed and the shape of the road;
- (iv) Speed and visibility; and
- (v) Speed and traffic flow.

(8) *Space management*. The procedures and techniques for controlling the space around the vehicle, including:

- (i) The importance of space management;
- (ii) Space cushions, e.g., controlling space ahead/to the rear;
- (iii) Space to the sides; and
- (iv) Space for traffic gaps.

(9) *Night operation*. Preparations and procedures for night driving, including:

- (i) Night driving factors, e.g., driver factors, (vision, glare, fatigue, inexperience), roadway factors, (low illumination, variation in illumination, familiarity with roads, other road users, especially drivers exhibiting erratic or improper driving), vehicle factors (headlights, auxiliary lights, turn signals, windshields and mirrors); and
- (ii) Night driving procedures, e.g., preparing to drive at night and driving at night.

(10) *Extreme driving conditions*. The basic information on operating in extreme driving conditions and the hazards that are encountered in extreme conditions, including:

- (i) Adverse weather;
- (ii) Hot weather; and
- (iii) Mountain driving.

(11) *Hazard perceptions*. The basic information on hazard perception and clues for recognition of hazards, including:

- (i) Importance of hazards recognition;
- (ii) Road characteristics; and
- (iii) Road user activities.

(12) *Emergency maneuvers*. The basic information concerning when and how to make emergency maneuvers, including:

- (i) Evasive steering;
- (ii) Emergency stop;
- (iii) Off-road recovery;
- (iv) Brake failure; and
- (v) Blowouts.

(13) *Skid control and recovery*. The information on the causes and major types of skids, as well as the procedures for recovering from skids.

(d) *Relationship of cargo to vehicle control*. The principles and procedures for the proper handling of cargo, including:

- (1) The importance of proper cargo handling, e.g., consequences of improperly se-

cured cargo, drivers' responsibilities, Federal/State and local regulations.

(2) Principles of weight distribution.

(3) Principles and methods of cargo securement.

(e) *Vehicle inspections*: The objectives and proper procedures for performing vehicle safety inspections, as follows:

(1) The importance of periodic inspection and repair to vehicle safety and to prevention of enroute breakdowns.

(2) The effect of undiscovered malfunctions upon safety.

(3) What safety-related parts to look for when inspecting vehicles, e.g., fluid leaks, interference with visibility, bad tires, wheel and rim defects, braking system defects, steering system defects, suspension system defects, exhaust system defects, coupling system defects, and cargo problems.

(4) Pre-trip/enroute/post-trip inspection procedures.

(5) Reporting findings.

(f) *Hazardous materials knowledge, as follows*:

(1) What constitutes hazardous material requiring an endorsement to transport; and

(2) Classes of hazardous materials, labeling/placarding requirements, and the need for specialized training as a prerequisite to receiving the endorsement and transporting hazardous cargoes.

(g) *Air brake knowledge as follows*:

(1) General air brake system nomenclature;

(2) The dangers of contaminated air (dirt, moisture and oil) supply;

(3) Implications of severed or disconnected air lines between the power unit and the trailer(s);

(4) Implications of low air pressure readings;

(5) Procedures to conduct safe and accurate pre-trip inspections, including knowledge about:

- (i) Automatic fail-safe devices;
- (ii) System monitoring devices; and
- (iii) Low pressure warning alarms.

(6) Procedures for conducting enroute and post-trip inspections of air actuated brake systems, including ability to detect defects which may cause the system to fail, including:

(i) Tests which indicate the amount of air loss from the braking system within a specified period, with and without the engine running; and

(ii) Tests which indicate the pressure levels at which the low air pressure warning devices and the tractor protection valve should activate.

(h) *Operators for the combination vehicle group shall also have knowledge of*:

(1) *Coupling and uncoupling*. The procedures for proper coupling and uncoupling a tractor to semi-trailer.

(2) Vehicle inspection—The objectives and proper procedures that are *unique* for performing vehicle safety inspections on combination vehicles.

EXAMPLES OF SPECIFIC SKILLS ELEMENTS

These examples relate to paragraphs (a) and (b) of § 383.113 only.

(a) *Basic vehicle control skills.* All applicants for a CDL must possess and demonstrate the following basic motor vehicle control skills for each vehicle group which the driver operates or expects to operate. These skills shall include:

- (1) Ability to start, warm-up, and shut down the engine;
- (2) Ability to put the motor vehicle in motion and accelerate smoothly, forward and backward;
- (3) Ability to bring the motor vehicle to a smooth stop;
- (4) Ability to back the motor vehicle in a straight line, and check path and clearance while backing;
- (5) Ability to position the motor vehicle to negotiate and then make left and right turns;
- (6) Ability to shift as required and select appropriate gear for speed and highway conditions;
- (7) Ability to back along a curved path; and
- (8) Ability to observe the road and the behavior of other motor vehicles, particularly before changing speed and direction.

(b) *Safe driving skills.* All applicants for a CDL must possess and demonstrate the following safe driving skills for any vehicle group. These skills shall include:

- (1) Ability to use proper visual search methods.
- (2) Ability to signal appropriately when changing speed or direction in traffic.
- (3) Ability to adjust speed to the configuration and condition of the roadway, weather and visibility conditions, traffic conditions, and motor vehicle, cargo and driver conditions;
- (4) Ability to choose a safe gap for changing lanes, passing other vehicles, as well as for crossing or entering traffic;
- (5) Ability to position the motor vehicle correctly before and during a turn to prevent other vehicles from passing on the wrong side as well as to prevent problems caused by off-tracking;
- (6) Ability to maintain a safe following distance depending on the condition of the road, on visibility, and on vehicle weight; and
- (7) Ability to adjust operation of the motor vehicle to prevailing weather conditions including speed selection, braking, direction changes and following distance to maintain control.

Subpart H—Tests

SOURCE: 53 FR 27657, July 21, 1988, unless otherwise noted.

§ 383.131 Test procedures.

(a) *Driver information manuals.* Information on how to obtain a CDL and endorsements shall be included in manuals and made available by States to CDL applicants. All information provided to the applicant shall include the following:

- (1) Information on the requirements described in § 383.71, the implied consent to alcohol testing described in § 383.72, the procedures and penalties, contained in § 383.51(b) to which a CDL holder is exposed for refusal to comply with such alcohol testing, State procedures described in § 383.73, and other appropriate driver information contained in subpart E of this part;
- (2) Information on vehicle groups and endorsements as specified in subpart F of this part;
- (3) The substance of the knowledge and skills which drivers shall have as outlined in subpart G of this part for the different vehicle groups and endorsements;
- (4) Details of testing procedures, including the purpose of the tests, how to respond, any time limits for taking the test, and any other special procedures determined by the State of issuance; and
- (5) Directions for taking the tests.

(b) *Examiner procedures.* A State shall provide to test examiners details on testing and any other State-imposed requirements in the examiner's manual, and shall ensure that examiners are qualified to administer tests on the basis of training and/or other experience. States shall provide standardized scoring sheets for the skills tests, as well as standardized driving instructions for the applicants. Such examiners' manuals shall contain the following:

- (1) Information on driver application procedures contained in § 383.71, State procedures described in § 383.73, and other appropriate driver information contained in subpart E of this part;
- (2) Details on information which must be given to the applicant;